

NAAQS STANDARD SETTING

ISSUE SUMMARY:

The National Ambient Air Quality Standards (NAAQS) continue to be a cornerstone of how implementation of the Clean Air Act (CAA) protects public health across the U.S. Several NAAQS reviews are currently underway pursuant to the 5 year review requirements of the CAA.

UPCOMING MILESTONES:

Ozone

- The ozone NAAQS were last reviewed in 2015. During that review, both the primary and secondary standards were revised to 70 parts per billion (ppb).
- In July 2020, EPA proposed to retain without revision the current ozone standards set in 2015.
 - EPA preliminarily concluded that current scientific information continues to support the conclusion that the primary standard established in 2015 protects public health with an adequate margin of safety, including the health of at-risk populations, and that the existing secondary standard continues to provide protection against an array of ecological effects, including effects of ozone exposure on vegetation.
- Administrator Wheeler has committed publicly to completing the ozone review in 2020.

Particulate Matter (PM)

- The PM NAAQS were last reviewed in 2012. During that review, EPA revised the annual health-based standard for fine particles to a level of 12.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and retained the 24-hour fine particle standard of 35 $\mu\text{g}/\text{m}^3$. The Agency also retained the existing standards for coarse particle pollution (PM_{10}) of 150 $\mu\text{g}/\text{m}^3$, and the existing secondary standard for $\text{PM}_{2.5}$ of 15.0 $\mu\text{g}/\text{m}^3$. EPA is reviewing the ecological effects of PM as part of the review of the secondary standards for $\text{NO}_x/\text{SO}_x/\text{PM}$ (see below).
- In April 2020, EPA proposed to retain without revision all existing primary and secondary standards for PM.
 - EPA preliminarily concluded that current scientific information continues to support the conclusion that the primary standard established in 2012 protects public health with an adequate margin of safety, including the health of at-risk populations, and that the existing secondary standard continues to provide protection against visibility impairment in cities and in the most treasured national parks, and to protect structures (e.g., buildings, monuments) from acid rain formed from particles (nitrates and sulfates).
- Administrator Wheeler has committed publicly to completing the PM review in 2020.

Lead

- The Lead NAAQS were last reviewed in 2016. At that time, EPA decided to retain, without revision, the 2008 primary and secondary standards (a rolling 3-month average of 0.15 $\mu\text{g}/\text{m}^3$ not to be exceeded).

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- In March 2020, EPA announced the intent to initiate the next lead NAAQS review. A call for information was published in July 2020. No additional information on the timeline has been released publicly.

Secondary Standards for Oxides of Nitrogen (NO_x), Oxides of Sulfur (SO_x) and PM

- The secondary standards for NO_x and SO_x were last reviewed in 2012, focusing on risks to aquatic and terrestrial ecosystems from deposition of these pollutants, and the Agency decided to retain the current secondary standards.
- EPA is currently reviewing secondary standards for NO_x, SO_x and PM together to allow for a more integrated consideration of nitrogen deposition on ecological systems.
- A final Integrated Science Assessment (ISA) was released in September 2020 and a draft policy assessment (PA), with risk and exposure assessments (REA) is expected to be released in 2021.

Note: EPA has no current efforts underway to review the primary standards for NO_x and SO_x, or the NAAQS for carbon monoxide.

BACKGROUND:

The CAA requires EPA to review the NAAQS every five years. There are six NAAQS criteria pollutants: carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O₃), particulate matter (PM), lead (Pb) and sulfur oxides (SO_x). Each NAAQS pollutant has at least one standard to protect public health (primary) and, with the exception of CO, at least one standard to protect welfare (secondary), such as ecosystems.

The NAAQS review process involves several steps, starting with the development of an Integrated Review Plan (IRP) that presents the schedule for and process of conducting the review, and the key policy relevant science issues that will guide the review. ORD then prepares an ISA, which is a comprehensive review, synthesis and evaluation of the most policy relevant science, including key science judgements. OAR develops the policy assessment (PA) and any Risk/Exposure Assessment (REA). The REA draws upon the conclusions presented in the ISA to develop quantitative characterizations of exposures and risks to human health or the environment under current air quality conditions, and with air quality estimated to meet the standard or alternative standards under consideration. The REA also characterizes the uncertainties associated with these estimates. The PA draws upon the ISA and REA and provides a transparent staff analysis of the scientific basis for alternative policy options for consideration by EPA senior management prior to rulemaking. The PA facilitates the Clean Air Scientific Advisory Committee's (CASAC) advice to the Agency and recommendations to the Administrator, as provided for in the CAA. Ultimately, EPA proposes a rulemaking that takes into consideration the information in the ISA, REA and PA and the advice of CASAC, and communicates the Administrator's proposed decisions regarding the review of the NAAQS. A public process takes place, including a public comment period and public hearings, leading to the promulgation of a final rule.

After EPA issues a new or revised NAAQS, EPA must designate areas of the country according to whether they are meeting or not meeting the NAAQS following a consultative process with the states and tribes. See the "NAAQS Implementation" paper for additional information.

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KEY EXTERNAL STAKEHOLDERS:

- ☒ Congress ☒ Industry ☒ States ☒ Tribes ☒ Media ☐ Other Federal Agency
☒ NGO ☒ Other (name of stakeholder) previous CASAC members

NAAQS reviews generate significant interest in the stakeholder community. During the public comment periods for the current O₃ and PM NAAQS reviews, the Agency received comments from members of Congress, environmental groups and other stakeholders regarding the revised process for completing these reviews, including changes to the CASAC panel members and process, and the limited timeframe provided for the review and for the public process. Some of these stakeholders also commented that the current levels of the standards, considering more recent scientific studies, are not adequate to protect the public, especially those at highest risk of exposures. Industry and other NGO stakeholders supported the Agency's proposal to retain the current standards.

MOVING FORWARD:

The most pressing near-term priorities are to complete the NAAQS reviews for ozone and PM by the end of 2020.

LEAD OFFICE/REGION: OAR

OTHER KEY OFFICES/REGIONS: ORD, OGC